

Kentucky Department of Education
Science Adoption 2008-2014

Provided by the Publisher	ISBN - 0534997236		Publisher - Thomson Learning		Provided by the Publisher
	College Physics				
	Type - P1	Author - Serway/ Faughn/Vuille			
	Copyright - 2006	Edition - 7th	Readability -	10.7 Flesch-Kincaid	
	Course - Physics		Grade(s) -	9,10,11,12	
	Teacher Edition ISBN if applicable			0534999212	

Overall Recommendation:

☒ **Recommended as Basal**

Overall Strengths, Weaknesses, Comments:

This text is recommended as an AP Physics level text. In as much, the text and teacher manual are designed to be used in a traditional collegiate lecture style format. The text includes a large number of practice problems for students in addition to having numerous applications that provide authentic situations for students. Throughout the chapter, there are strong examples of problem solving to assist the students. There is web based assistance available which offers interactive learning to the students and teacher. Any inquiry and lab based activities would have to be supplemented.

CRITERIA

This basal resource ...

A. Encompasses KY Content Standards & Grade Level Expectations

☒ **Strong Evidence**
☐ **Moderate Evidence**
☐ **Little or No Evidence**

☒ Text is designed to be used in an elective course outside the Program of Studies

1) Includes the 7 Big Ideas of science to the following extent:

- | | |
|---|---|
| a) Structure and Transformation of Matter | <input type="checkbox"/> Strong <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Little <input type="checkbox"/> N/A |
| b) Motion and Forces | <input checked="" type="checkbox"/> Strong <input type="checkbox"/> Moderate <input type="checkbox"/> Little <input type="checkbox"/> N/A |
| c) The Earth and the Universe | <input type="checkbox"/> Strong <input type="checkbox"/> Moderate <input type="checkbox"/> Little <input checked="" type="checkbox"/> N/A |
| d) Unity and Diversity | <input type="checkbox"/> Strong <input type="checkbox"/> Moderate <input type="checkbox"/> Little <input checked="" type="checkbox"/> N/A |
| e) Biological Change | <input type="checkbox"/> Strong <input type="checkbox"/> Moderate <input type="checkbox"/> Little <input checked="" type="checkbox"/> N/A |
| f) Energy Transformation | <input type="checkbox"/> Strong <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Little <input type="checkbox"/> N/A |
| g) Interdependence | <input type="checkbox"/> Strong <input type="checkbox"/> Moderate <input type="checkbox"/> Little <input checked="" type="checkbox"/> N/A |

2) Addresses content-specific enduring

☒ Strong ☐ Moderate ☐ Little ☐ N/A

understandings from the related Program of Studies standards.

3) Addresses content-specific skills and concepts from the related Program of Studies standards. ☒ Strong ☐ Moderate ☐ Little ☐ N/A

4) Content addressed is current, relevant and non-trivial ☒ Strong ☐ Moderate ☐ Little ☐ N/A

5) Provides opportunities for critical thinking/reasoning ☒ Strong ☐ Moderate ☐ Little ☐ N/A

6) Strengths, Weaknesses, Comments:

- Specific strengths-which areas/concepts are covered exceptionally well?
- Specific weaknesses-which areas/concepts would likely require supplementing?

This text is very strong in Motion and Forces and in the physics applications of Structure and Transformation of Matter and Energy Transformation area, while not covering other related fields, the portions that are covered are done so in a strong manner. Numerous problems allow for ample practice of problem solving for the students as well as for truly understanding the topics as the problems are well written and engaging requiring the students to reason and think critically in order to demonstrate their understanding.

B. Functionality & Suitability

☐ Strong Evidence
☒ Moderate Evidence
☐ Little or No Evidence

1) Suitability ☒ Strong ☐ Moderate ☐ Little ☐ N/A

- Should be suitable for use with a diverse population and is free of bias regarding race, age, ethnicity, gender, religion, social and/or geographic environment; is free of stereotyping or bias of any kind.

2) Content quality ☒ Strong ☐ Moderate ☐ Little ☐ N/A

- Free from factual errors
- Content is presented conceptually when possible—more than a mere collection of facts
- Content included accurately represents the knowledge base of the discipline
- Theories/scientific models contained represent a broad consensus of the scientific community

3) Connections to Literacy

Note: may apply to either student or teacher editions

☐ Strong ☐ Moderate ☒ Little

- Employs a variety of reading levels and is grade/level appropriate
- Contains pre, during, post reading activities
- Provides opportunities for summarizing, reviewing, and reinforcing vocabulary skills and concepts at multiple levels of difficulty for a variety of learning styles.
- Student text provides opportunity to integrate reading and writing
- Uses vocabulary that is age and content appropriate
- Focuses on critical vocabulary vs. extensive lists

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- Identifies key vocabulary through definitions in both text and glossary
- Engaging text- does the text facilitate learning?
- Does understanding the text require having performed the imbedded activities?

4) Connections to Technology

☐ Strong ☒ Moderate ☐ Little

- Integrates technology and reflects the impact of technological advances
- Uses technology in the collection and/or manipulation of authentic data

5) Support for Diverse Learners

☐ Strong ☐ Moderate ☒ Little

- Provides support for ESL students
- Provides support for differentiation of instruction in diverse classrooms

Note: may apply only to teacher edition

6) Strengths, Weaknesses, Comments:

- Reviewers may provide page numbers to point out specific strong examples for individual evaluation standards.

No evidence of bias is noted with this text. No errors were noted in factual content of the text nor in the problems reviewed. The literacy connections are quite limited with this text as opportunities for reviewing and summary are limited to problem solving activities. The reading level seems to be consistent throughout for this text. The connections to technology provided with the materials are web based assistance which does allow for students to use interactive examples, coached problems, and sample test questions to allow for self assessment. No materials were submitted to assist with ESL students.

C. Supports Inquiry and Skill Development

☐ Strong Evidence
☒ Moderate Evidence
☐ Little or No Evidence

1) Promotes Inquiry, research and Application of Learning

☐ Strong ☐ Moderate ☒ Little

- Provides opportunities for inquiry and research that includes activities such as self-selecting topics, formulating authentic questions, gathering information, researching resources, observing, interviewing, and evaluating information, analyzing and synthesizing data and communicating findings and conclusions.
- Requires students to use higher-level cognitive skills (analysis, synthesis, evaluation, etc.)
- Provides activities and projects for students to deepen their knowledge and cultivate and strengthen problem-solving and decision-making skills.
- Provides opportunities for application of learned concepts.
- Uses a variety of relevant charts, graphs, diagrams, time lines, and other illustrations to invite and motivate students to engage in discussion, problem solving, and other high-order thinking skills.
- Emphasizes conceptual understandings that invite students to predict, conclude, evaluate, develop and extend ideas to support reasoning.

Note: may apply to either teacher or student edition

2) Skill Development

☒ Strong ☐ Moderate ☐ Little

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- Provides opportunities to make sense of data
- Provides opportunities for critical thinking and reasoning (analyze arguments, distinguish fact/opinion, recognize bias)
- Provides opportunities to examine a range of types of evidence
- Contains embedded activities (or extensions) that emphasize use of technology for problem solving

Note: may apply to either teacher or student edition

3) Strengths, Weaknesses, Comments:

There are numerous and variable well written problems to allow students the opportunity to make sense of data and to practice critical thinking skills in the problems provided. The embedded activities are limited to sample problems and situations along with authentic application readings. The hands on interactive type inquiry type of activities are not provided in this text.

D. Supports Best Practices of Teaching and Learning

- ☐ Strong Evidence
☒ Moderate Evidence
☐ Little or No Evidence

1) Engages Students

☒ Strong ☐ Moderate ☐ Little

- Includes content geared to the needs, interests, and abilities of students
- Engages and motivates students using components such as real-life situations, simulations, experiments, and data gathering.
- Includes information and activities that assist students in seeing relevance of concepts (where appropriate) to their own lives and experiences
- Provides a variety of strategies, activities, and materials to enhance student learning at the appropriate learning levels
- Activities are truly congruent to the concepts addressed, not merely correlated

Note: may apply to either teacher or student edition

2) Uses Assessment to Inform Instruction

☐ Strong ☒ Moderate ☐ Little

- Includes multiple means of assessment as an integral part of instruction
- Provides evaluation measures in the teacher edition that supports differentiated learning activities
- Embedded assessments reflect a variety of Depth of Knowledge levels

Note: may apply to either teacher or student edition

3) Strengths, Weaknesses, Comments:

- Reviewers may provide page numbers to point out specific strong examples for individual evaluation standards

The problems written to support student learning are quite realistic and interesting to work with and solve. Strategies are provided throughout the chapters to assist students in developing the skills and thinking strategies required to solve the problems. The majority of assessment included are word type problems requiring application of covered concepts. The accompanying website assistance offers

additional self assessment for the students in addition to interactive examples.

E. Has an Organization/ Format that Supports Learning and Teaching

☐ Strong Evidence
☒ Moderate Evidence
☐ Little or No Evidence

1) Organizational Quality

☐ Strong ☒ Moderate ☐ Little

- Print and/or electronic materials present minimal barriers to learners
 - Presents chapters/lessons in an organized and logical sequence
 - Provides clearly stated objectives for each lesson.
 - Uses text features (e.g., titles, headings, subheadings, review questions, goals, objectives, space, print, type size, color) to enhance readability.
 - Makes use of various forms of media (e.g., CD's, recordings, videos, cassette tapes, computer software, web-based components) as either student or teacher resources
 - Includes clear, accurate, appropriate and clearly explained illustrations and/or graphics that reinforce content standards.
 - Incorporates a glossary, footnotes, recordings, pictures, and/or tests that aid pupils and teachers in using the book effectively
 - Uses grade-appropriate type size
- Included media are durable, easy to use and have technical merit
- Construction appears to be durable and able to withstand normal use

2) Essential Components (beyond student and teacher text)

☐ Strong ☐ Moderate ☐ Little

- Items identified as essential components support the learning goals and concept coverage of the basal

3) Strengths, Weaknesses, Comments:

- Reviewers may provide page numbers to point out specific strong examples for individual evaluation standards.

The text is very well organized and follows a logical order for student understanding of the concepts. Clearly stated objectives for lessons were not apparent, however a chapter outline is provided at the beginning of each chapter for the student in the student edition. The manner in which the chapters are organized allow for ease of student use through the use of headings and subheadings. Variable forms of media are limited to the web based applications. The illustrations and graphics used are a strength and used often in problems and example aiding the student in clarifying the situation being described in the problems.

F. Has available Ancillary/ Gratis Materials

Note: The decision whether to recommend or not recommend this resource as a basal should not be influenced by Section F

☐ Strong Evidence
☒ Moderate Evidence
☐ Little or No Evidence

1) Ancillary/Gratis Materials

- Coordinates teacher resources easily with student material (e.g., accompaniments included, student pages shown, instructional technology indicated).

- Are well-organized and easy to use
- Provide substantive learning opportunities and are congruent with student learning goals
- Provide opportunities for high-level thinking, assessment, and/or problem solving

2) Strengths, Weaknesses, Comments:

- Reviewers may provide page numbers to point out specific strong examples for individual evaluation standards.

Available ancillary materials appeared to be well organized and easy for the teacher to use. While not extensive in quantity, materials that are available will provide help to the teachers and students. Opportunities for high-level thinking, assessment, and/or problem solving are included in the problems associated with the text. The multimedia manager will assist teachers in lecture preparations.